FORM PTO-1449/A and B (Modified)

Sheet

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

of

APPLICATION NO.: 09/804,987	ATTY. DOCKET NO.: M0765/7035
FILING DATE: March 13, 2001	
APPLICANT: Waeber, et al.	
GROUP ART UNIT: not yet assigned	EXAMINER: not yet assigned

U.S. PATENT DOCUMENTS

Examiner's	Cite	U.S. Patent Doc	ument	Name of Patentee or Applicant of Cited	Date of Publication or of issue
Initials#	No.	Number	Kind Code	Document	of Cited Document MM-DD-YYY
RLi		6,098,631	_	Holoshitz, et al.	August 8, 2000
		5,939,425		Caruso	August 17, 1999
		5,712,262		Spiegel	January 27, 1998
V		5,585,476		MacLennan	December 17, 1996
	ļ		<u> </u>		

FOREIGN PATENT DOCUMENTS

Examiner'	s Cit	e Foi	reign Patent Docum	ient	Name of Patentee or Applicant of Cited	Date of Publication of	Translation
Initials#	No	Office/ Country	Number	Kind Code	Document (not necessary)	Cited Document MM-DD-YYYY	(Y/N)
RLi		PCT	WO 99/46277			09/16/99	
1		PCT	WO 99/35259			07/15/99	
		PCT	WO 99/12533			03/18/99	
		PCT	WO 98/53062	-		11/26/98	
V		PCT	WO 97/00952			01/09/97	

OTHER ART — NON PATENT LITERATURE DOCUMENTS

Examiner's	Cite	Include name of the author (in CAPITAL LETTERS) title of the article (when appropriate), title of the	Translation			
Initials#	No	item (book, magazine, journal, serial, symposium, catalog, etc.), date, relevant page(s), volume-issue				
		number(s), publisher, city and/or country where published.				
RLi		An, et al., "Molecular cloning of the human Edg2 protein and its identification as a functional cellular receptor for lysophosphatidic acid", <i>Biochem. Biophys. Res. Comm.</i> , 231(3):619-22 (1997) ABSTRACT				
1		Ancellin, et al., "Differential pharmacological properties and signal transduction of the sphingosine 1-phosphate receptors EDG-1, EDG-3, and EDG-5", <i>J. Biol. Chem.</i> , 274(27):18997-9002 (1999) ABSTRACT				
		Auge, et al., "Role of sphingosine 1-phosphate in the mitogenesis induced by oxidized low density lipoprotein in smooth muscle cells via activation of sphingomyelinase, ceramidase, and sphingosine kinase", <i>J. Biol. Chem.</i> , 274(31):21533-8 (1999) ABSTRACT				
		Brindley, et al., "Analysis of ceramide 1-phosphate and sphingosine-1-phosphate phosphatase activities", Methods in Enzymology, 311(27):233-244 (1999)				
		Chasen, et al., "Cardiovascular triggers and morning events", <i>Blood Press. Monit.</i> , 3(1):35-42 (1998) ABSTRACT				
		Coplin, et al., "Cerebrospinal fluid creatine kinase-BB isoenzyme activity and outcome after subarachnoid hemorrhage", <i>Arch. Neurol.</i> , 56(11):1348-52 (1999) ABSTRACT				
Y		Coroneos, et al., "Differential regulation of sphingomyelinase and ceramidase activities by growth factors and cytokines. Implications for cellular proliferation and differentiation", <i>J. Biol. Chem.</i> , 270(40):23305-9 (1995) ABSTRACT				

	(P) MILE & 2001 (U)	
kLi	De Jonghe, et al. Structure-activity elationship of short-chain sphingoid bases as inhibitors of sphingosine kinase", Bioorg. Med Chem. Latt. (21):3175-80 (1999) ABSTRACT	
	Edmunds, et al., "Effects of tumor necrosis factor-alpha on the coronary circulation of the rat isolated perfused heart: a potential role for thromboxane A2 and sphingosine", <i>Br. J. Pharmacol.</i> , 123(3):493-8 (1998) ABSTRACT	
	Edsall, et al., "Enzymatic measurement of sphingosine 1-phosphate", Anal Biochem, 272(1):80-6 (1999) ABSTRACT	
	Erickson, et al., "Edg-2/Vzg-1 couples to the yeast pheromone response pathway selectively in response to lysophosphatidic acid", <i>J. Biol. Chem.</i> , 273(3):1506-10 (1998) ABSTRACT	
	Fatatis, et al., "Sphingosine and sphingosine 1-phosphate differentially modulate platelet-derived growth factor BB-induced Ca2+ signaling in transformed oligodendrocytes", J. Biol. Chem., 271(1):295-301 (1996) ABSTRACT	:-
	Heximer, et al., "RGS2/GOS8 is a selective inhibitor of Gqα function", <i>Proc. Natl. Acad. Sci.</i> USA, 94:14389-14393 (1997)	
	Hooks, et al., "Characterization of a receptor subtype-selective lysophosphatidic acid mimetic", Mol. Pharmacol., 53(2):188-94 (1998) ABSTRACT	
	Klages, et al., "Activation of G_{12}/G_{13} results in shape change and Rho/Rho -Kinase-mediated myosin light chair phosphorylation in mouse platelets", <i>J. Cell Biol.</i> , 144(4):745-754 (1999)	n
	Kohama, et al., "Molecular cloning and functional characterization of murine sphingosine kinase", <i>J. Biol. Chem.</i> , 273(37):23722-8 (1998) ABSTRACT	
	Kozai, et al., "Platelet activating factor causes hyperconstriction at the inflammatory coronary lesions in pigs in vivo", Coron. Artery Dis., 8(7):423-32 (1997) ABSTRACT	1
	Lee, et al., "Lysophosphatidic acid stimlates the G-protein-coupled receptor EDG-1 as a low affinity agonist", Biol. C hem., 273(34):22105-12 (1998) ABSTRACT	J.
	Lee, et al., "Sphingosine 1-phosphate induces angiogenesis:its angiogenic action and signaling mechanism in human umbilical vein endothelial cells", <i>Biochem. Biophys. Res. Comm.</i> , 264(3):743-750 (1999) ABSTRACT	
	Lee, et al., "Sphingosine-1-phosphate as a ligand for the G protein-coupled receptor EDG-1", <i>Science</i> 279(5356):1552-5 (1998) ABSTRACT	
	Li, et al., "Effects of ceramide on Kca channel activity and vascular tone in coronary arteries", <i>Hypertension</i> , 33(6):1441-6 (1999) ABSTRACT	
	Liu, et al., "Ligand-induced trafficking of the sphingosine-1-phosphate receptor EDG-1", <i>Mol. Biol. Cell.</i> , 10(4):1179-90 (1999) ABSTRACT	
	MacLennan, et al., "Cloning and characterization of a putative G-protein coupled receptor potentially involved in development", Mol. Cell. Neurosci., 5(3):201 ABSTRACT	
	Mandala, et al., "Molecular cloning and characterization of a lipid phosphohydrolase that degrades sphingosine 1-phosphate and induces cell death", <i>PNAS</i> , 97(14):7859-7864 (2000)	·-
	Mao, et al., "The dihydrosphingosine-1-phosphate phosphatases of Saccharomyces cerevisiae are important regulators of cell proliferation and heat stress response", <i>Biochem. J.</i> , 342 (Pt 3):667-75 (1999) ABSTRACT	
	Masana, et al., "Cloning and characterization of a new member of the G-protein coupled receptor EDG family" Receptors Channels, 3(4):255-62 (1995) ABSTRACT	,
	Meij, J.T., "Regulation of G protein function: implications for heart disease", Mol. Cell Biochem., 157(1-2):31-(1996) ABSTRACT	-8
	Murohara, et al., "Effects of sphingomyelinase and sphingosine on arterial vasomotor regulation", <i>J. Lipid Res.</i> 37(7):1601-8 (1996) ABSTRACT	,
	Murray, et al., "Effect of protein kinase C inhibitors on endothelin- and vasopressin-induced constriction of the rat basilar artery", Am. J. Physiol., 263(6 Pt 2):H1643-9 (1992) ABSTRACT	;
	Murray, et al., "Role of protein kinase C in constrictor responses of the rat basilar artery in vivo", <i>J. of Phys.</i> , 445:169-179 (1992)	
	Murray, et al., "Signal transduction pathways in constriction of the basilar artery in vivo", <i>Hypertension</i> , 19(6 (2):739-42 (1992) ABSTRACT	.p
	Offermanns, et al., "Gα ₁₃ are phosphorylated during platelet activation", <i>J. Biol. Chem.</i> , 271(42):26044-26048 (1996)	
	Okamoto, et al., "EDG3 is a functional receptor specific for sphingosine 1-phosphate and sphingosylphosphorylcholine with signaling characteristics distinct from EDG1 and AGR16", <i>Biochem. Biophys. Res. Commun.</i> , 260(1):203-8 (1999) ABSTRACT	
1	Olivera, et al., "Effect of acidic phospholipids on sphingosine kinase", J. Cell. Biochem., 60(4):529-37 (1996) ABSTRACT	

•		(P)	
RLi		Olivera, et al., "Sphing one kinase expression increases intracellular sphingosine-1-phosphate and promotes cell growth and survival", J. China (1999) ABSTRACT	
		Parfenova, et al., "Role of tyrosine phosphorylation in the regulation of cerebral vascular tone in newborn pig in vivo", Am. J. Physiol., 276(1 Pt 2):H185-932 (1999) ABSTRACT	
		Prieschl, et al., "The balance between sphingosine and sphingosine-I-phosphate is decisive for mast cell activation after Fc epsilon receptor I triggering", J. Exp. Med., 190(1):1-8 (1999) ABSTRACT	
		Rakhit, et al., "Sphingosine 1-phosphate stimulation of the p42/p44 mitogen-activated protein kinase pathway in airway smooth muscle", <i>Biochem. J.</i> , 338(Pt 3):643-9 (1999) ABSTRACT	
		Rizza, et al., "Lysophosphatidic acid as a regulator of endothelial/leukocyte interaction", <i>Lab Invest.</i> , 79(10):1227-35 (1999) ABSTRACT	
	a	Salomone, et al., "Sphingosine-1 phosphate and dihydrosphingosine-1-phosphate exert potent and long lasting contractile effects on isolated rat basilar, but not carotid artery", Poster Presentation @ 6 th Conference on EBL in Cancer, Inflammatory and related diseases, Boston, September 13 th , 1999	
	9	Sehic, et al., "Effect of protein kinase C inhibitors on the actions of phorbol esters on vascular tone and adrenergic transmission in the isolated rat kidney", <i>J. Pharmacol. Exp. Ther.</i> , 253(2):497-507 (1990) ABSTRACT	
		Shatrov, et al., "Sphingosine-1-phosphate mobilizes intracellular calcium and activates transcription factor NF-kappa B in U937 cells", <i>Biochem.</i> , <i>Biophys. Res. Comm.</i> , 234(1):121-4 (1997) ABSTRACT	
		Shinpo, et al., "Protective effects of the TNF-ceramide pathway against glutamate neurotoxicity on cultured mesencephalic neurons", <i>Brain Res.</i> , 819(1-2):170-3 (1999) ABSTRACT	
		Spiegel, et al., "Roles of sphingosine-1-phosphate in cell growth, differentiation, and death", <i>Biochemistry</i> (Mosc), 63(1):69-73 (1998) ABSTRACT	
		Spiegel, et al., "Sphingolipid metabolism and cell growth regulation", FASEB J., 10(12):1388-97 (1996) ABSTRACT	
		Spiegel, et al., "Sphingosine-1-phosphate in cell growth and cell death", Ann N Y Acad Sci, 845:11-8 (1998) ABSTRACT	
		Spiegel, S., "Sphingosine 1-phosphate: a prototype of a new class of second messengers", J. Leukoc Biol., 65(3):341-4 (1999) ABSTRACT	
		Windh, et al., "Differential coupling of the sphingosine 1-phosphate receptors edg-1, edg-3, and H218/Edg-5 to the g(i), g(q), and G(12) families of heterotrimeric G proteins", <i>J. Biol. Chem.</i> , 274(39):27351-8 (1999) ABSTRACT	
		Xia, et al, "High density lipoproteins (HDL) interrupt the sphingosine kinase signaling pathway. A possible mechanism for protection against atherosclerosis by hdl", <i>J. Biol. Chem.</i> , 274(46):33143-33147 (1999) ABSTRACT	
		Xia, et al., "Activation of sphingosine kinase by tumor necrosis factor-alpha inhibits apoptosis in human endothelial cells", J. Biol. Chem., 274(48):34499-505 (1999) ABSTRACT	
		Yamaguchi, et al., "Molecular cloning of EDG-3 and N-Shc genes from the puffer fish, fugu rubripes, and conservation of synteny with the human genome(1)", FEBS Lett., 459(1):105-10 (1999) ABSTRACT	
		Yamaguchi, et al., "Molecular cloning of the novel human G protein-coupled receptor (GPCR) gene mapped on chromosome 9", Biochem. Biophys. Res. Commun., 227(2):608-14 (1996) ABSTRACT	
		Yang, et al., "Sphingosine 1-phosphate formation and intracellular Ca2+ mobilization in human platelets: evaluation with sphingosine kinase inhibitors", <i>J. Biochem.</i> , 126(1):84-9 (1999) ABSTRACT	
		Yatomi, et al., "N,N-dimethylspingosine inhibition of sphingosine kinase and sphingosine 1-phosphate activity in human platelets", <i>Biochemistry</i> , 35(2):626-33 (1996) ABSTRACT	
		Yatomi, et al., "Sphingosine-1-phosphate: a platelet-activating sphingolipid released from agonist-stimulated human platelets", <i>Blood</i> , 86(1):193-202 (1995) ABSTRACT	
		Yoshida, et al., "Activation of Gil by lysophosphatidic acid receptor without ligand in the baculoviurs expression system", Biochem. Biophys. Res. Commun., 259(1):78-84 (1999) ABSTRACT	
		Young, et al., "Lysophosphatidic acid-mediated Ca2+ mobilization in human SH-SY5Y neuroblastoma cells is independent of phosphoinositide signalling, but dependent on sphingosine kinase activation", <i>Biochem. J.</i> , 343 Pt 1:45-52 (1999) ABSTRACT	

RLi	Zheng, et al. C ₂ -ceramide attenuates canine cerebral rescular smarth musc	prostaglandin $F_{2\alpha}$ -induced vasoconstriction and elevation of $[Ca^{2+}]_i$ in ele", Neuroscience Letters, 256:113-116 (1998)		
RL'i	Zondag, et al., "Sphingosine 1-phospl 330(Pt 2):605-9 (1998) ABSTRACT	nate signalling through the G-protein-coupled receptor Edg-1", Biochem. J.,		
			-	
		772-1.		
		111000000000000000000000000000000000000		
EXAMINER		DATE CONSIDERED	<u> </u>	
	Ruixlang Li	2/04/2013		
	Freference considered, whether or not citation is m with next communication to applicant.	in conformance with MPEP 609; Draw line through citation if not in conformance at	nd not con	.siderec
copy of this reference	e is not provided as it was previously cited by or	r submitted to the office in a prior application, Serial No, filed _ continuation-in-part, and divisional applications).		, an
	e a copy of any patent, publication, other info	ormation listed, even if it was previously submitted to, or cited by, the U.S. Paten IDS and is relied upon for an earlier filing date under 35 U.S.C. §120, and the c	t Office ir	ı an

526609.1

in the earlier application.]

FORM PTO-1449 (Modified) SERIAL NO.: 09/804,967 ATTY. DOCKET NO.: M0765/7035 LIST OF PATENTS AND PUBLICATION APPLICANT: Waeber, et al. INFORMATION DISCLOSURE STATEMENT FILING DATE: March 13, 2001 GROUP: 1614)

U.S. PATENT DOCUMENTS

Exam Init	Ref Des	Document No.	Date	Name	Class	Sub Class	FILING DATE If Appropriate
RLi	A1	5,688,499	11/18/97	Banting, et al.	Α		
	·						

FOREIGN PATENT DOCUMENTS

Country & Doc. No. (11)	Pub. Date (43)	Class	Sub Class	Translation Yes	n No

OTHER ART

(Including Author, Title, Date, Pertinent Pages, Publication, Etc.)

RLi	C14	Tigyi, et al., "Lysophosphatidic acid alters cerebrovascular reactivity in piglets", Am J Physiol. Vol 268(5 Pt 2), pp.H2048-55 (see abstract, lines 20-26) 1995
	C15	Siess, et al., "Lysophosphatidic acid and sphingosine 1-phosphate: two lipid villains provoking cardiovascular disease?", IUBMB Life, Vol. 49, pp.167-171 (see abstract lines 1-10) 2000
	C16	Yamazaki, et al. "Edg-6 as a putative sphingosine 1-phosphate receptor coupling to Ca+2 signaling pathway", Biochem Biophys Res. Comm.l, Vol. 268, pp. 583-589 (see entire document) 2000
	C17	Matsuda, et al., "The quality control of stroma-free hemoglobin: lysophosphatidylcholine, a component of stromal phospholipids, as candidate vasoconstrictive factor", Art. Cells Blood Substit Immobil Biotechnol., Vol. 22, pp. 939-944 (see abstract, lines 13-end) 1994
¥	C18	Goetzl, et al. "A subfamily of G-protein-coupled cellular receptors for lysophospholipids and lysosphingolipids" Adv. Exp. Med. Biol, Vol. 469, pp. 259-264 (see entire document) 1999

EXAMINER Ruiniang L.	DATE CONSIDERED 3/24/2003
----------------------	---------------------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to applicant